

I Claim:

1. A method for producing a bacterium that contains a eukaryotic and/or viral gene, which comprises culturing virally-infected eukaryotic cells under low oxygen conditions to produce a bacterium containing a eukaryotic and/or viral gene.

2. The method according to claim 1, wherein said low oxygen conditions comprise anaerobic culture conditions with at least one exposure of the cells to aerobic or microaerophillic culture conditions.

3. The method according to claim 2 which further comprises subjecting the cells to an aerobic culturing step.

4. The method according to claim 2, wherein said anaerobic culture conditions comprise an atmosphere containing less than or equal to 1 v/v% oxygen, based on the total volume of atmosphere.

5. The method according to claim 4, wherein said atmosphere contains less than 0.1 v/v % oxygen, based on the total volume of atmosphere.

6. The method according to claim 1 wherein said virally-infected eukaryotic cells are retrovirally-infected mammalian cells.

7. The method according to claim 6, wherein said mammalian cells are human cells.

8. The method according to claim 1, wherein said eukaryotic cell is a mammalian, avian or fish cell.

9. The method according to claim 8, wherein said eukaryotic cell is an endothelial cell.

10. The method according to claim 1, wherein said eukaryotic cell is a mammalian brain capillary endothelial cell.

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11. The method according to claim 1, wherein said virally-infected cell is infected with a virus selected from the group consisting of L-cell virus, simian immunodeficiency virus (SIV), human immunodeficiency virus (HIV), Ableson murine leukemia virus and Moloney murine leukemia virus.

12. The method according to claim 11, wherein said virus is the L-cell virus.

13. The method according to claim 1, wherein said culturing step is carried out at a temperature between about 20 and about 50° C.

14. The method according to claim 1, wherein said culturing step is carried out at a temperature of about 37° C.

15. A method for producing a bacterium that contains a eukaryotic and/or viral gene, which comprises (a) culturing virally-infected eukaryotic cells under anaerobic conditions with at least one exposure to aerobic or microaerophilic conditions, (b) culturing cells from step (a) under aerobic conditions, and (c) isolating at least one bacterium that contains a eukaryotic or viral gene.

16. The method according to claim 15, wherein aerobic culturing step (b) is carried out in an atmosphere containing at least 0.1 v/v% oxygen, based on the total volume of atmosphere.

17. The method according to claim 16, wherein said atmosphere contains more than 1 v/v% oxygen, based on the total volume of atmosphere.

18. The method according to claim 15, wherein said virally-infected eukaryotic cell is a retrovirally-infected mammalian endothelial cell.

*SUB A3* 19. The method according to claim 15, wherein said virally-infected eukaryotic cell is a human brain capillary endothelial cell infected with the L-cell virus.

5 20. The method according to claim 1, further comprising filtering the cells cultured in step (a) prior to said aerobic culturing step (b).

21. The method according to claim 20, comprising filtering the cells through a 0.1 to 0.8  $\mu\text{m}$  filter.

10 22. The method according to claim 21, wherein said filter is 0.1 to 0.45  $\mu\text{m}$ .

*SUB A4* 23. The method according to claim 22, wherein said filter is 0.22  $\mu\text{m}$ .

15 24. A bacterium containing a eukaryotic gene prepared by a process according to claim 1.

25. A bacterium containing a eukaryotic gene prepared by a process according to claim 15.

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